CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION

ORDER NO. 96-44
1B780640SON

WASTE DISCHARGE REQUIREMENTS

FOR

COUNTY OF SONOMA
ANNAPOLIS SOLID WASTE DISPOSAL SITE
CLASS III WASTE MANAGEMENT UNIT

Sonoma County

The California Regional Water Quality Control Board, North Coast Region, (hereinafter the Regional Water Board) finds that:

1. The Sonoma County Department of Public Works, hereinafter discharger, submitted a report of waste discharge including technical reports for the Annapolis Solid Waste Disposal Site (SWDS) on April 30, 1996. The site is located approximately ten miles east of the community of Sea Ranch in the NW 1/4 of Section 17, T10N, R13W, MDB&M, as shown on Attachments "A" and "B" incorporated herein and made part of this Order. The disposal site property is owned by the County of Sonoma.

2. Waste Discharge Requirements Order No. 78-64 was adopted by the Regional Water Board on April 20, 1978 designating the Annapolis site as a Class II-2 landfill. The landfill classification system was later modified and Class II-2 landfills became Class III landfills under the revised nomenclature. The Regional Water Board adopted Order No 93-83, General Waste Discharge Requirements for Municipal Solid Waste Landfills on September 27, 1993, which amended existing requirements for the Annapolis SWDS. Orders No. 78-64 and 93-83 are currently in effect and contain discharge specifications and provisions regulating the operation of the site. Additional technical reports describing site hydrogeology, extent of groundwater contamination, final site design specifications, and closure plans, have been submitted and are considered part of the Report of Waste Discharge.

3. The State Water Resources Control Board has adopted regulations governing waste discharges to land. The regulations are codified in Chapter 15, Title 23, California Code of Regulations (hereinafter Chapter 15). On October 9, 1993, federal land disposal regulations became effective under Subtitle D of the Resource Conservation and Recovery Act (RCRA). The State Water Resources Control Board will revise Chapter 15 regulations as necessary to conform with the federal regulations. This Order also implements State Board Resolution No. 93-62, Policy for Regulation of Discharges of Municipal Solid Waste adopted June 17, 1993.

4. The disposal site delineated in the Report of Waste Discharge and Attachments "A" and "B" meets the criteria contained in Chapter 15 for classification as a Class III landfill.

5. The site has been operated as an existing landfill since early in 1970, and ceased to accept solid waste in February 1995 when a transfer station was constructed onsite. The total area of the disposal site is approximately 40 acres and waste materials consist of nonhazardous municipal solid waste. All wastes disposed at the site are Class III wastes. The amount of solid waste currently in place at the site is approximately 24,819 cubic yards. Final contours for the site are described in the report titled "Final Closure Plan, Annapolis Disposal Site", dated April 1995.

6. The annual rainfall for the area is approximately 74 inches per year, with 94% of the rainfall occurring between October and April. Land use within 1,000 feet of the site is rural residential.

7. Surface water in the vicinity of the site occurs as rainfall runoff from the surrounding hillside areas. Surface water runoff is routed around the site in a system of ditches and culverts. Drainage from the disposal site is tributary to the Wheatfield Fork of the Gualala River.

8. The site was originally operated as a canyon fill with earth abutments and later operated as an area fill over the existing footprint. On site borrow materials have been used for cover.

9. The site is located less than five miles inland of the coast on a thin contact of flat lying Pliocene Ohlson Ranch formation

consisting of poorly consolidated marine sandstones, siltstones, and conglomerates, with the underlying steeply dipping Jurassic-Cretaceous Franciscan formation consisting of interbedded marine sandstone, shale and conglomerate. The soils in the vicinity of the landfill consist of well drained gravely loams with gravelly sandy clay loam subsoil. No Holocene faults have been identified within one mile of the site.

10. Groundwater conditions within the vicinity of the landfill are discontinuous and highly variable, largely controlled by joints, fractures, and shear zones within the Franciscan formation. Most groundwater in the vicinity is derived for domestic and agricultural uses from wells within the Franciscan formation, however, the yield from these wells is reportedly highly variable, often inadequate and of variable quality. Shallow groundwater occurs within the contact zone of the Ohlson Ranch formation and the Franciscan formation. The direction of groundwater flow at the site has a westerly trend.

11. The site is not located within a 100 year flood plain. Drainage structures are in place to divert storm water around the waste disposal area to minimize erosion. The majority of storm water runoff is diverted to a sedimentation pond to reduce sediment loss from the site.

12. Infiltration of rainfall, seepage of perched water, and waste decomposition may generate leachate in waste disposal cells. Leachate is a liquid which contains pollutants that could be released at concentrations in excess of applicable water quality objectives or cause degradation of waters of the state. Leachate must be collected and managed as a designated waste, defined in Section 2522 of Chapter 15. The discharger has constructed a french drain leachate extraction system in the west slope of the landfill within the fill. Collected leachate is piped to on site storage tanks prior to being hauled for treatment to a publicly owned sewage treatment plant.

13. Pursuant to Title 23, Chapter 15, Article 5 of the California Code of Regulations, the County has set up an enterprise fund account for the Annapolis Landfill. The purpose of this fund is to finance the County's liability for assurance of financial responsibility for initiating and completing corrective action for

all known or reasonably foreseeable releases from the Annapolis Landfill. Disbursements from the enterprise fund account shall only be for corrective action for known and reasonably foreseeable releases from the landfill.

14. The Water Quality Control Plan for the North Coast Region includes water quality objectives for point and non point source discharges and statewide plans and policies.

15. Beneficial uses of areal groundwater includes domestic water supply.

16. Beneficial uses of the Gualala River include:

a. domestic supply
b. industrial water supply
c. water contact recreation
d. non-contact water recreation
e. commercial and sport fishing
f cold freshwater habitat
g. fish migration and spawning
h. wildlife habitat
i. estuarine habitat and aqua culture

17. A negative declaration was prepared and approved by the County of Sonoma on April 19, 1994. The Regional Water Board has considered the negative declaration.

18. This project is exempt from provisions of the California Environmental Quality Act 1970 as an existing facility (Title 14, Division 7, Chapter 3, Section 15301).

19. The Regional Water Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge and provided them with an opportunity to comment at a public meeting and an opportunity to submit their written comments.

20. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

HEREFORE, IT IS HEREBY ORDERED that, Waste Discharge Requirements Order No. 78-64 are rescinded and General Order No. 93-83 is amended to delete the *County of Sonoma, Annapolis Solid Waste Disposal Site, Class III Waste* Management Unit (County of Sonoma), and the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. The discharge of any waste not specifically regulated by the effective date of this Order is prohibited.

2. The treatment, storage or disposal of wastes, including leachate, shall not cause pollution, contamination, or nuisance as defined in Section 13050, (l) and (m), of the California Water Code.

3. *The discharger shall not cause the concentration of any* Constituent of Concern to exceed its representative concentration limit in any monitoring medium. The concentration limit for each monitoring parameter will be set at background concentration. Data analysis will be performed in accordance with the approved *Monitoring and Reporting Program.*

4. The discharge of wastes, including leachate, to surface waters, surface water drainage systems or groundwater is prohibited.

5. *The discharge of leachate to land which is not controlled by the* discharger is prohibited.

6. Ponding of liquids, including rainfall runoff and leachate, over solid waste disposal cells is prohibited.

B. RECEIVING WATER LIMITATIONS FOR SURFACE WATERS

1. The discharge must not cause the receiving water to contain substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life.

2. The discharge must not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board as required

by the Clean Water Act, and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Clean Water Act, or amendments thereof, the Regional Water Board will revise and modify the waste discharge requirements.

3. The discharge shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.

4. The discharge must not cause the pH of the receiving waters to be depressed below 6.5 nor raised above 8.8. Within this range, the discharge shall not cause the pH of the receiving waters to be changed at any time more than 0.5 units from that which occurs naturally.

5. The discharge must not cause the receiving waters to contain floating material, including solids, liquids, foams and scums in concentrations that cause nuisance or adversely affect beneficial uses.

6. The discharge must not contain concentrations of biostimulants which promote objectionable aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses of the receiving waters.

7. The discharge must not cause a measurable temperature change in the receiving waters.

C. WATER QUALITY PROTECTION STANDARDS

1. Water quality protection standards (WQPS) for indicator parameters and waste constituents which are reasonably expected to be in or derived from waste discharged to the landfill are established by background water quality concentrations at groundwater monitoring stations MW1R and MW5R. WQPS are derived from water quality data obtained in recent years. WQPS for constituents which do not occur naturally are set at minimum laboratory detection limits using standard EPA analytical methods. The current WQPS for naturally occurring constituents are set in the attached monitoring and reporting program.

2. The list of Constituents of Concern (Compounds and Analytical Methods) as required under Section 2550.3, Article 5, Chapter 15 includes:

   a. Volatile organic compounds (EPA Methods 8260)
   b. Semivolatile organic compounds (EPA Method 8270)
   c. Dioxins and Furans (EPA Method 1613-A)
   d. Polynuclear Aromatic Compounds (EPA Method 610)
   e. Metals (Copper, Iron, Manganese, Vanadium, Zinc)
   f. Minerals (Calcium, Magnesium, Potassium, Sodium)
   g. General water quality parameters (alkalinity, chloride, fluoride, nitrate nitrogen, sulfate, tannins and lignins, TDS, pH, and chemical oxygen demand)

   Monitoring parameters are specified in the Monitoring and Reporting Program attached to this Order.

3. Concentration limits for waste constituents shall be equal to the water quality protection standards contained in C.1. above unless it is determined that a release has occurred and corrective action measures are necessary. Concentration limits will be reconsidered in the event that corrective action measures are required.

4. Points of compliance are defined as a vertical projection from the down gradient edge of the landfill to the groundwater phreatic surface.

D. DISCHARGE SPECIFICATIONS

1. Containment structures such as caps shall receive final inspection and approval by the Executive Officer.

2. In the event that leachate is removed from the landfill, it shall be handled and disposed of in a manner approved by the Executive Officer.

3. Surface drainage from tributary areas and internal site drainage shall not contact or percolate through wastes discharged at the site.

4. Final cover shall conform to criteria specified in Construction Specifications contained in this Order. The discharger shall install a sufficient number of permanent survey monuments on or

near the landfill from which elevation of disposal cells can be determined. Such monuments shall be installed by a licensed surveyor or registered civil engineer.

5. Annually, prior to October 1, any necessary erosion control measures shall be implemented and any necessary construction, maintenance or repairs of drainage control facilities shall be completed to minimize erosion and prevent flooding at the site. All disturbed areas shall be seeded with an appropriate grass mixture to minimize erosion. Rainfall runoff from all disturbed areas shall be channelled through sedimentation basins to minimize sedimentation in surface drainages below the site. Sedimentation basins shall be cleaned out during the rainy season as necessary to maintain adequate sedimentation basin capacity. The Executive Officer may delete the requirement of submitting annual erosion control reports upon a finding that the site is adequately stabilized and that no erosion control work is necessary prior to the return of winter rains.

6. Leachate collection and removal systems shall be operated so as to minimize buildup of leachate in the landfill and minimize conditions of saturated garbage. Leachate removed from the landfill shall be discharged into above ground structurally sound storage tanks. Storage tanks shall have a berm or other revetment of adequate size and integrity to contain the largest potential discharge of leachate from the storage tanks.

E. CONSTRUCTION SPECIFICATIONS

1. Precipitation and drainage control systems shall be designed and constructed to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping from precipitation events of a 100 year, 24 hour storm event.

2. All containment structures and erosion control and drainage systems shall be designed and constructed under direct supervision of a California registered civil engineer or certified engineering geologist and shall be certified by that individual as meeting the prescriptive standards and performance goals of Chapter 15.

3. Materials used to construct final cover shall have appropriate physical and chemical properties to ensure containment of wastes

over the closure and postclosure maintenance periods. Construction quality assurance reports and as-built drawings shall be submitted to the Regional Water Board within 60 days of completing final cover construction.

4. Final cover shall consist of at least two feet of compacted foundation material, overlain by a reinforced geosynthetic clay liner (GCL) low permeability layer, and overlain by a minimum 12 inches of compacted vegetative material. The GCL shall consist of a layer of natural bentonite clay, providing an equivalent hydraulic conductivity of $5x10^{-9}$ cm/sec or less, encapsulated between a geotextile. Permeability of final cover shall be determined in the field and in the laboratory using techniques approved by the Executive Officer. Construction methods and quality assurance procedures shall be sufficient to ensure that all parts of the final cover meet the permeability and stability requirements. Final cover materials shall be designed and constructed to function with a minimum of maintenance. Installation of final cover shall be under the direct supervision of a California registered civil engineer or certified engineering geologist. Materials and construction techniques shall meet the specifications and requirements in the final closure plan.

5. Vegetation shall be established immediately upon completion of the final cover. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative soil thickness.

6. Materials used to construct leachate collection and removal systems shall have appropriate physical and chemical properties to ensure the required transmission of leachate through the systems over the closure and postclosure maintenance period of the landfill. Materials shall have sufficient thickness and strength to prevent collapse under the pressures exerted by the overlying wastes, waste cover materials and equipment operating on the surface of the landfill.

F. PROVISIONS

1. The discharger shall implement closure plans in accordance with the time schedule outlined below:

a. By October 1, 1996, complete construction of the final cap and submit as built drawings to the Regional Water Board by January 1, 1997.

2. On June 1st of each year, the discharger shall submit a report to the Regional Water Board concerning operation of the leachate collection and removal system. The collection and removal system shall be tested annually to demonstrate proper operation.

3. The discharger shall comply with Monitoring and Reporting Program No. 96-44, the General Monitoring and Reporting Provisions, and the Contingency Planning and Notification Order No. 74-151 and any modifications to these documents as specified by the Executive Officer. Such documents are attached to this Order and incorporated herein.

4. If the discharger determines that a previously unknown physical release from the waste management unit as defined in Section 2550.1(a)(3), Chapter 15, has occurred, the discharger shall:

   a. Immediately notify the Regional Water Board verbally and take all necessary corrective actions. Written notification should be provided within 7 days of occurrence.

   b. Within 90 days institute an evaluation monitoring program, in accordance with Section 2550.8(k)(5) and Section 2550.9, Chapter 15.

5. Upon initial determination that there is statistical evidence of a previously unknown release from a waste management unit, the discharger shall:

   a. Immediately notify Regional Water Board staff verbally of the finding and provide written notification by certified mail within 7 days.

   b. Immediately initiate the verification monitoring to verify that there is a statistically significant release. Results of the verification procedure and initial statistical test shall be reported to the Regional Water Board by certified mail within 7 days of the last laboratory analysis.

6. If the verification procedure confirms there is statistically significant evidence of a previously unknown release from the waste management unit, the discharger shall:

   a. Within 30 days sample all monitoring points in the affected medium and determine the concentration of all constituents of concern.

   b. Within 90 days submit a revised report of waste discharge proposing an evaluation program meeting the provisions of Section 2550.9, Chapter 15.

   c. Within 180 days of verifying statistically significant evidence of a release from a waste management unit, submit an engineering feasibility study for a corrective action program. The corrective action program shall meet requirements of Section 2550.10, Chapter 15, at a minimum.

7. If the discharger verifies that there has been a statistically significant release from a waste management unit, the discharger may demonstrate that a source other than the waste management unit caused the evidence of a release or that the evidence is an artifact caused by an error in sampling, analysis, or the data analysis protocol. The discharger may make a demonstration in addition to or in lieu of submitting an amended report of waste discharge and an engineering feasibility study pursuant to Section F.6. above. The discharger is not relieved of the requirements of Section F.5. above unless the demonstration report is accepted by the Executive Officer. In making a demonstration, the discharger shall:

   a. Within 7 days of verifying evidence of a release, submit a report to the Regional Water Board by certified mail that the discharger intends to make a demonstration pursuant to Section 2550.8(k)(7), Chapter 15.

   b. Within 90 days of verifying evidence of a release, submit a report to the Regional Water Board that demonstrates that a source other than the waste management unit caused the apparent release.

   c. Within 90 days of verifying evidence of a release, submit an amended report of waste discharge to make any appropriate changes to the detection monitoring program.

8. The discharger shall notify the Regional Water Board in writing of any proposed change in ownership or responsibility for closure or post closure maintenance of the landfill. This notification shall be given prior to the effective date of the change and shall include a statement by the new discharger remaining closure and post closure maintenance activities will be in compliance with any existing waste discharge requirements and any revisions thereof. The Regional Water Board shall amend the waste discharge requirements to name the new discharger.

9. The discharger shall notify the Regional Water Board by telephone immediately upon learning of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or the precipitation and drainage control structures. Confirmation shall follow in writing within two weeks of the telephone notification. Any site condition which threatens the integrity of the containment features or disposal site shall be promptly corrected.

10. The discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the discharger to achieve compliance with the waste discharge requirements.

11. This Order is subject to Regional Water Board review and updating, as necessary, to comply with changing State or Federal laws, regulations, policies, or guidelines; changes in the Regional Water Board's Basin Plan; or changes in the discharge characteristics, in three year increments from the effective date of this Order.

12. After notice and opportunity for hearing, this Order may be terminated or modified for cause, including but not limited to:

    a. Violation of any term or condition of this Order;

    b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;

13. The discharger shall permit the Regional Water Board:

    a. Entry upon the premises in which a waste source is located or in which any required records are kept;

b. Access to copy any records required to be kept under terms and conditions of this Order;

c. Inspection of monitoring equipment or records; and

d. Sampling of any discharge.

14. The discharger shall remove and relocate any wastes discharged at this site in violation of this Order.

15. In the event the discharger is unable to comply with any of the conditions of this Order due to:

a. Breakdown of waste treatment equipment;

b. Accidents caused by human error or negligence; or

c. Other causes, such as acts of nature;

the discharger shall notify the Executive Officer by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.

16. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel, who shall be familiar with its contents.

17. The discharger shall comply with all applicable provisions of Chapter 15 that are not specifically referred to in this Order.

18. The discharger shall annually on June 1st, submit evidence that adequate financial assurance for corrective action and closure and postclosure maintenance is still in effect.

19. The discharger shall annually on June 1st, submit a statement that the amount of financial assurance for corrective action and postclosure maintenance is still adequate or increase the amount if necessary.

20. The discharger shall annually submit a statement that the postclosure maintenance plan is still adequate and in conformance with existing regulations.

21. The Regional Water Board considers the property owner to have a continuing responsibility for correcting any problems as a result of this waste discharge which may arise in the future. This responsibility continues during subsequent use of the land including use by subsequent owners.

22. The discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with Monitoring and Reporting Program No. 96-44 as required by Section 13750 through 13755 of the California Water Code.

Certification

I, Benjamin D. Kor, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on May 23, 1996

Benjamin D. Kor
Executive Officer

(annpwdr)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION

MONITORING AND REPORTING PROGRAM NO. 96-44

FOR

COUNTY OF SONOMA
ANNAPOLIS SOLID WASTE DISPOSAL SITE
CLASS III WASTE MANAGEMENT UNIT

SONOMA COUNTY

The discharger shall maintain water quality monitoring systems that are appropriate for detection and evaluation monitoring and that comply with the provisions of Title 23, California Code of Regulations (CCR), Division 3, Chapter 15, Article 5.

Compliance with this Monitoring and Reporting Program, is ordered by Waste Discharge Requirements Order No. 96-44. Failure to comply with this Program constitutes non-compliance with the WDRs and with the Water Code.

A. REPORTING

The Discharger shall report monitoring data and information as required in the Monitoring and Reporting Program. Reports which do not comply with the required format will be rejected and the Discharger shall be deemed in non-compliance with the WDRs. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernable. The data shall be summarized in a manner so as to illustrate clearly the compliance with waste discharge requirements or lack thereof. A short discussion of the monitoring results, including notations of any water quality violations, shall precede the tabular summaries.

Field and laboratory tests shall be reported in quarterly monitoring reports which shall be submitted to the Regional Water Board by the 15th day of the month following the month in which the samples were taken. The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Regional Water Board. An annual report shall be submitted to the Regional Water Board which contains both tabular and graphical summaries of the monitoring data obtained during the previous sampling events, so as to show historical trends at each well.

Method detection limits and practical quantification limits shall be reported. All peaks shall be reported, including those which cannot be quantified and/or specifically identified.

B. REQUIRED MONITORING REPORTS

1. Water Quality Protection Standard Report

The discharger submitted a water quality protection standard report in the "Proposed Water Quality Monitoring Program and Response Plan", Annapolis Disposal Site dated August 1994. Any changes to the water quality protection standard described in this report shall be described in the annual monitoring report.

2. Detection Monitoring Report

The Discharger shall submit reports of the results of detection monitoring in accordance with the schedules specified in this Monitoring and Reporting Program.

3. Annual Monitoring Summary Report

The Discharger shall submit the Annual Monitoring Summary Report in accordance with the schedules specified in this Monitoring and Reporting Program.

4. Constituents-of-Concern (COC) 5 Year Report

The Discharger shall submit reports of the results of groundwater and surface water monitoring for the Constituents of Concern every 5 years, or more frequently if required. The groundwater monitoring for COC Report shall alternate between fall and spring seasons. The COC Report may be combined with a Detection Monitoring Report or an Annual Summary Report having a Reporting Period that ends at the same time. The Discharger shall report to the Regional Water Board by no later than January 31 of a given year the analytical results of the sample taken the previous fall. When the sample is taken in the spring, the Discharger shall report the analytical results to the Regional Water Board no later than August 1.

Standard Observations

Each monitoring report shall include a summary and certification of completion of all Standard Observations for the waste management unit, for the perimeter of the WMU, and for the receiving waters. The standard observations shall be performed on a weekly basis and shall include erosion control problems, leachate seeps and discharges, impacts on surface waters, condition of cover and vegetation, condition of drainage facilities, freeboard in leachate holding facilities, condition of sedimentation basins, condition of access roads, or other problems which could affect compliance with the waste discharge requirements.

C. MONITORING

The Annapolis landfill shall be monitored for leak detection. Groundwater samples shall be collected and analyzed as recommended in the *"Proposed Water Quality Monitoring Program and Response Plan" dated August* 1994.

Statistical analyses for leak detection monitoring shall be performed on an interwell basis. Concentration limits for man made chemicals shall be set at method detection limits (MDLs) for individual analytes. Concentration limits for naturally occurring compounds are determined statistically for groundwater and surface water monitoring programs using the methods listed in Tables 3-1, 3-2, 3-3, and 3-4 of the "Proposed Water Quality Monitoring Program and Response Plan" dated August 1994.

If the Discharger, through a detection monitoring program, or the Regional Water Board finds that there is a statistically significant increase in indicator parameters or waste constituents over the water quality protection standards (established pursuant to Monitoring and Reporting Program No. 96-44) at or beyond the Points of Compliance, the Discharger shall notify the Regional Water Board or acknowledge the Regional Water Board's finding in writing within seven days, and shall immediately resample for the constituent(s) or parameter(s) at the point where the standard was exceeded. Within 90 days, the Discharger shall submit to the Regional Water Board the results of the resampling and either:

a. a report demonstrating that the water quality protection standard was not, in fact, exceeded; or
b. an amended Report of Waste Discharge for the establishment of a verification monitoring program, per Section 2557 of Chapter 15, which is designed to verify that water quality protection standards have been exceeded and to determine the horizontal and vertical extent of pollution.

If the Discharger, through an evaluation monitoring program, or the Regional Water Board verifies that water quality protection standards have been exceeded at or beyond Points of Compliance, the Discharger shall notify the Regional Water Board or acknowledge the Regional Water Board's finding in writing within seven days. Within 180 days, the Discharger shall submit to the Regional Water Board an amended Report of Waste Discharge for the establishment of a corrective action program, per Section 2558 of Chapter 15, which is designed to achieve compliance with the water quality protection standards.

D. REQUIRED MONITORING PROGRAMS

1. Leachate Monitoring Program

If leachate surfaces and is being discharged to surface waters, the discharger shall immediately sample the leachate and analyze the

leachate for constituents listed in Table I. Also, leachate from Leachate Well, LW-1 and any subsequent leachate wells, shall be monitored according to the schedule in Table I.

For COC detection, the leachate holding facility will be sampled in the fourth quarter of 1996, or as soon thereafter as measurable leachate can be collected, for the parameters and frequencies in Table I. Those COCs that are detected will be analyzed in leachate in the following quarter. Any COCs detected in the retest shall be included in the COC list for groundwater and surface water.

Thereafter, leachate samples for COC detection will be collected annually as soon as measurable leachate is collected. If constituents are detected that are not already COCs, leachate will be resampled for those constituents only in the following quarter. If the COC is detected in the retest sample it shall be added to the list of COCs in the groundwater monitoring program and the surface water monitoring program.

TABLE I - LEACHATE MONITORING PROGRAM

Parameter	Units	Frequency
Field Parameters		
Total Flow	gallons	Quarterly
Flow Rate	gallons/day	Quarterly
Temperature	°F	Quarterly
Monitoring Parameters		
Total Dissolved Solids	mg/L	Quarterly
pH	pH units	Quarterly
Chlorides	mg/L	Quarterly
Sulfates	mg/L	Quarterly
Chemical Oxygen Demand	mg/l	Quarterly
Mg, Na, Ca, K, Mn, & Bo	mg/L	Quarterly
Constituents of Concern		
Volatile Organic Compounds (EPA Method 8260, see Attachment D)	µg/L	Annually
Semi-Volatile Organic Compounds (EPA Method 8270, see Attachment D)	µg/L	Every 5 Years
Organochlorine Pesticides, PCBs (EPA Method 8080)	µg/L	Every 5 Years
Chlorophenoxy Herbicides (EPA Method 8150)	µg/L	Every 5 Years
Inorganics (dissolved)	mg/L	Annually

2. Detection Monitoring Program

For each monitoring medium, all Monitoring Points assigned to detection monitoring or corrective action monitoring shall be monitored quarterly for the Monitoring Parameters listed in this Program.

Groundwater sampling shall also include an accurate determination of the groundwater surface elevation and field parameters (pH, temperature, electrical conductivity) for that Monitoring Point. Groundwater elevations taken prior to purging the well and sampling for Monitoring Parameters shall be used to fulfill the groundwater gradient/direction analyses as required. For each monitored groundwater body, the Discharger shall measure the water level in each well and determine groundwater gradient and direction at least semi annually, including the times of expected highest and lowest elevations of the water level for the respective groundwater body. Groundwater elevations for monitoring wells for a given groundwater body shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater gradient and direction. This information shall be included in the quarterly monitoring reports.

Statistical or non-statistical analyses shall be performed as soon as the monitoring data are available.

3. Groundwater Monitoring

The groundwater surface elevation (in feet and hundredths, M.S.L) in all wells shall be measured on a quarterly basis and used to determine the direction of groundwater flow. This information shall be displayed on a water table contour map and/or groundwater flow net for the site and submitted with the quarterly monitoring reports.

Locations of monitoring wells are shown on Attachment B. Samples shall be collected from the wells at the frequency and for the parameters specified in Table II.

TABLE II - GROUNDWATER MONITORING PROGRAM

Parameter	Units	Frequency
Field Parameters		
Temperature	Degrees C	Quarterly
Groundwater Elevation	Feet above MSL	Quarterly
Monitoring Parameters		
Volatile Organic Compounds (EPA Method 8260, see Attachment C)	ug/L	Quarterly
Calcium	mg/l	Quarterly
Magnesium	mg/l	Quarterly
Sodium	mg/l	Quarterly
pH	pH units	Quarterly
Chloride	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Nitrate	mg/l	Quarterly
Fluoride	mg/l	Quarterly
Alkalinity	mg/l	Quarterly
Total Dissolved Solids	mg/L	Quarterly
Chemical Oxygen Demand (COD)	mg/L	Quarterly
Constituents of Concern		
Volatile Organic Compounds (EPA Method 8260, see Attachment D)	ug/L	5 years
Semi Volatile Organic Compounds (EPA Method 8270)	ug/L	5 years
Organochlorine Pesticides, PCBs (EPA Method 8080)	ug/L	5 years
Chlorophenoxy Herbicides (EPA Method 8150)	ug/l	5 years
Inorganics (dissolved)	mg/L	5 years

The groundwater shall be tested in the fourth quarter of 1996 for the entire list of COCs listed in Table II. Those COCs that are detected will be analyzed in the Spring of 1997. Any COCs detected in the retest sample shall be included in the COC list for groundwater. Thereafter, the COCs for the groundwater monitoring program shall include those COCs detected under the leachate monitoring program.

4. Surface Water Monitoring

Surface water sampling shall be performed at monitoring point SW-1 and monitoring point SW-2 as shown on Attachment B. Surface water samples are to be collected after the first storm of the rainy season which produces significant flow and again after half of the average seasonal rainfall has fallen. Samples shall be collected from both stations and analyzed at the frequency and for the monitoring parameters specified in Table III.

Surface water monitoring reports shall be submitted with the corresponding semi annual groundwater monitoring reports and shall include evaluation of potential impacts of the facility on surface water quality and compliance with the Water Quality Protection Standards.

TABLE III- SURFACE WATER MONITORING PROGRAM

Parameter	Units	Frequency
Field Parameters		
Temperature	Degrees C	Quarterly
Monitoring Parameters		
Total Suspended Solids (TSS)	mg/L	Quarterly
Total Dissolved Solids (TDS)	mg/L	Quarterly
pH	pH units	Quarterly
Turbidity	Turbidity units	Quarterly
Chloride	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Chemical Oxygen Demand (COD)	mg/L	Quarterly
Constituents of Concern		
Chemical Oxygen Demand (COD)	mg/L	5 years
Dissolved Oxygen	mg/L	5 years
Oil and Grease	mg/L	5 years
Inorganics (total recoverable metals)	mg/L	5 years

The surface water shall be tested in the fourth quarter of 1996 for the entire list of COCs listed in Table III. Those COCs that are detected will be analyzed in the Spring of 1997. Any COCs detected in the retest sample shall be included in the COC list for surface water. Thereafter, the COCs for the surface water monitoring program shall include those COCs detected and any COCs detected under the leachate monitoring program.

E. WATER QUALITY PROTECTION STANDARD

The Water Quality Protection Standard (Standard) consists of the following elements:

Constituents of Concern;
Concentration Limits;
Monitoring Points;
Points of Compliance;
Compliance Period.

Each of these is described as follows:

1. Constituents of Concern

The 'COC list' (list of Constituents of Concern required under 23 CCR 2550.3) shall include all constituents listed in Tables I, II, and III (above), the Waste Discharge Requirements Order No. 96-44 and all constituents listed in Attachment C. The Discharger shall monitor all COCs every five years, or more frequently as required.

2. Concentration Limits

The Concentration Limit for any given Constituent of Concern or Monitoring Parameter in a given monitored medium (i.e., the uppermost aquifer) at a landfill shall be as follows, and shall be used as the basis of comparison with data from the Monitoring Points in that monitored medium:

a. Concentration limits for man made chemicals shall be set at method detection limits;

b. Concentration limits for naturally occurring compounds are determined from individual well data using the statistical method listing in Groundwater Monitoring above.

c. A concentration limit greater than background, as approved by the Regional Water Board for use during or after corrective action.

3. Monitoring Points

The groundwater monitoring points for detection monitoring shall be MW 1R, MW 4R, MW 5R, and MW 6A (as shown on Attachment B).

4. Points of Compliance

The points of compliance for groundwater are MW 4R and MW 6A.

5. Compliance Period

The Compliance Period is the number of years equal to the closure and post closure maintenance period. Each time the Water Quality Protection Standard is exceeded (i.e., a release is discovered), the landfill begins a Compliance Period on the date the Regional Water Board directs the Discharger to begin an Evaluation Monitoring Program. If the Discharger's Corrective Action Program (CAP) has not achieved compliance with the Standard by the scheduled end of the Compliance Period, the Compliance Period is automatically extended until the landfill has been in continuous compliance for at least three consecutive years.

The Discharger shall implement the above monitoring program on the effective date of this Order.

Ordered by _____
for Benjamin D. Kor
Executive Officer

May 23, 1996

(annaptsmp)